

1      **WHAT IS CLAIMED IS:**

2            1. A pharmaceutical composition comprising a therapeutically effective  
3            amount of pharmaceutical-grade ferric citrate and a pharmaceutically  
4            acceptable carrier, excipient or diluent.

5            2. The pharmaceutical composition as claimed in claim 1 for providing  
6            iron to animals.

7            3. The pharmaceutical composition as claimed in claim 1 for the  
8            treatment of iron-deficiency diseases, renal failure and hyperphosphatemia.

9            4. A method for manufacturing pharmaceutical-grade ferric citrate,  
10           comprising:

11            mixing solid citric acid with a solid ferric salt to form a mixture;  
12            adding alcohol to the mixture; and  
13            filtering the mixture to obtain solid pharmaceutical-grade ferric citrate.

14            5. The method as claimed in claim 4, which further comprising drying  
15            solid pharmaceutical-grade ferric citrate obtained by heat.

16            6. The method as claimed in claim 5, wherein solid pharmaceutical-  
17            grade ferric citrate obtained is drying at 30°C to 120°C.

18            7. The method as claimed in claim 4, which further comprising  
19            purifying solid pharmaceutical-grade ferric citrate obtained, wherein solid  
20            pharmaceutical-grade ferric citrate obtained is mixed with alcohol and filtered  
21            mixture one or more times.

22            8. The method as claimed in claim 7, which further comprising drying  
23            solid pharmaceutical-grade ferric citrate purified by heat.

24            9. The method as claimed in claim 8, wherein solid pharmaceutical-

1 grade ferric citrate purified is drying at 30°C to 120°C.

2 10. The method as claimed in claim 4, wherein the ferric salt is ferric  
3 chloride, ferric sulfate or ferric nitrate.

4 11. A pharmaceutical-grade ferric citrate having the empirical formula  
5  $\text{FeC}_6\text{H}_5\text{O}_7 \cdot 3.5\text{H}_2\text{O}$ .

6 12. A food comprising pharmaceutical-grade ferric citrate as claimed in  
7 claim 11.